

Amendments to the Claims

1-23. (canceled)

24. (currently amended) A device, comprising:

a distributor unit in the device that distributes a plurality of packets in a data flow between a source and the device and a first set of security association information for each of the plurality of packets according to a distribution scheme and updates a second set of security association information for ~~one or more of~~ a packet in the plurality of packets; and

a plurality of security processing engines in the device, coupled to the distributor unit, configurable to perform authentication, encryption, or decryption functions,

wherein each of the plurality of security processing engines receives a packet and at least a portion of the first set of security association information associated with the packet, and wherein the plurality of security processing engines process the plurality of packets in parallel.

25. (previously presented) The device of claim 24, wherein the plurality of packets are buffered prior to being processed by the plurality of security processing engines.

26. (previously presented) The device of claim 24, further comprising a classification module that determines security association information associated with each packet in the plurality of packets, wherein the classification module is

configured to provide at least a portion of the security information associated with each packet to the distributor unit.

27. (previously presented) The device of claim 24, wherein the distributor unit and the plurality of security processing engines are on the same chip.

28. (previously presented) The device of claim 24, wherein the security association information includes a sequence number, an anti-replay window, and a lifetime of the security association.

29. (previously presented) The device of claim 28, wherein the security association information further includes an encapsulating security payload (ESP) encryption algorithm identifier and one or more ESP encryption keys.

30. (previously presented) The device of claim 29, wherein the security association information further includes an ESP authentication algorithm identifier and one or more ESP authentication keys.

31. (previously presented) The device of claim 28, wherein the security association information further includes an authentication header (AH) authentication algorithm identifier and one or more AH authentication keys.

32. (previously presented) The device of claim 28, wherein the security association information includes protocol mode information.

33. (previously presented) The device of claim 24, wherein the distribution scheme is a round-robin distribution scheme, wherein the distributor unit selects a next available security processing engine in a round-robin manner.

34. (previously presented) The device of claim 24, further comprising an order maintenance packet retirement unit.

35. (previously presented) The device of claim 34, wherein the distributor unit assigns packets for processing to a next available security processing engine regardless of the order received and the order maintenance packet retirement unit outputs the processed packets such that packet order is maintained.

36. (previously presented) The device of claim 24, wherein the device is a router.

37. (previously presented) The device of claim 24, wherein the device is a firewall.

38. (previously presented) The device of claim 24, wherein the device is a network communication device.

39. (previously presented) The device of claim 24, wherein the device system is a security gateway.

40. (previously presented) The device of claim 24, wherein the device is a server.

41. (previously presented) The device of claim 24, wherein the device is a network line card.

42. (currently amended) The device of claim 24, wherein the distributor unit is configured to update ~~updates~~ the second set of security information for a packet in

the plurality of packets after the associated packet has been processed by one of the plurality of security processing engines.

43. (previously presented) The device of claim 24, wherein the distributor unit includes a memory configured to store a copy of the security association information associated with each packet being processing by the plurality of security processing engines.

44. (previously presented) The device of claim 43, wherein the memory is further configured to store a copy of the security association information associated with each packet being buffered by the plurality of security processing engine.